

REMARKS

At the outset, Applicants wish to thank the Examiner for indicating that Claim 2 would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims.

Claims 1-10 are pending in this application. By this Amendment, claim 1 has been amended to more particularly point out and distinctly claim that the recited polymerization process involves olefin polymers, support for which can be found at page 1, line 3, and page 15, line 1. Claim 1 has also been amended to address the pending 112 rejection. Claim 2 has been amended to convert it to an independent claim, incorporating the limitations of previously pending claim 1, and to address the pending 112 rejection of claim 1. Claims 3, 4, and 5 have been amended to place the claims in better form or to address minor errors. No new matter has been introduced as a result of this Amendment.

Applicants have also submitted with this Amendment a Supplemental Information Disclosure Statement. Applicants respectfully request that the references listed on the accompanying PTO-1449 form be considered by the Examiner and be made of record herein.

Claim Rejections

Rejections Under 35 U.S.C. 112

A. Response to rejection of claims 1-8 under 35 U.S.C. §112, second paragraph, as being indefinite

In response to the rejection of claims 1-8 under 35 U.S.C. §112, second paragraph, as being indefinite, appropriate correction has been made. Applicants respectfully request reconsideration and withdrawal of the Rejection.

Rejections Under 35 U.S.C. § 103

B. Response to rejection of claims 1, 3-7, 9 and 10 under 35 U.S.C. §102(b) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Segalini.

In response to the rejection of claims 1, 3-7, 9 and 10 under 35 U.S.C. §102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over GB 1482148 of Segalini (“Segalini”), Applicants respectfully submit that the reference does not teach all the elements of the present claims, and that a *prima facie* case of Obviousness has not been made out, and traverse the Rejection.

With respect to the rejection under 102(b), for a reference to anticipate an invention, all of the elements of that invention must be present in the reference. The test for anticipation under section 102 is whether each and every element as set forth in the claims is found, either expressly or inherently, in a single prior art reference. *Verdegaal Bros. V. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must also be arranged as required by the claim. *In re Bond*, 15 USPQ2d 1566 (Fed. Cir. 1990).

With respect to the rejection under 103(a), the U.S. Supreme Court in *Graham v. John Deere Co.*, 148 U.S.P.Q. 459 (1966) held that non-obviousness was determined under §103 by (1) determining the scope and content of the prior art; (2) ascertaining the differences between the prior art and the claims at issue; (3) resolving the level of ordinary skill in the art; and, (4) inquiring as to any objective evidence of non-obviousness. Accordingly, for the Examiner to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. See MPEP §2143. Finally, all claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. (BNA) 580 (C.C.P.A. 1974).

First, Segalini clearly does not teach, suggest or disclose at least one widening and narrowing in a region other than that of the axial pump, as recited in the current claims.

Segalini's Sheet 1 clearly discloses only a single narrowing in the region of the axial pump, located in the spoolpiece between the pump and the reactor 3 (right-hand-side), and a widening in the piping above the flange on the outlet of reactor 3 (left-hand-side) at the inlet to the central section. Segalini clearly does not teach a narrowing in a region other than that of the axial pump, as in the currently recited claims.

Further, Segalini does not specifically teach a process where an olefin polymer of ethylene, propylene, butene or mixtures thereof is formed.

Reactors according to the invention have proved particularly suitable for the homo- and copolymerization of unsaturated esters or vinyl monomers in emulsion and solution from liquid or gaseous monomers. Vinyl esters such as vinyl acetate, propionate, versatate, butyrate, or benzoate; or methyl, ethyl, butyl or octyl acrylate or maleate or styrene may be copolymerized with ethylenically unsaturated gaseous comonomers such as vinyl chloride, ethylene, propylene, 1-butene, 1-hexene or a mixture of two or more olefins having from 2 to 6 carbon atoms in the molecule (page 1, left side, line 36 to right side, line 3).

Therefore, Segalini generally discloses polymerization of unsaturated esters or vinyl monomers, such as vinyl esters, with ethylene, propylene and 1-butene present as possible comonomers. Segalini's examples disclose vinyl acetate polymers containing at most 20 wt% ethylene; for example, Example 3 discloses a 60/20/20 weight percent split of a vinyl acetate-ethylene-vinyl chloride polymer. Clearly, these are not olefin polymers as recited in the present claims.

Moreover, there would be no expectation of success in modifying the teaching of Segalini to arrive at the present claims, since there is no teaching or suggestion that the use of a widening and narrowing in a region other than that of the axial pump for a polymerization process would result in an increase in the solids concentration of the polymerized product.

Therefore, for the above-stated reasons, the modifications suggested by the Examiner clearly do not represent a situation with a finite, and in the context of the art, small or easily traversed, number of options that would convince an ordinarily skilled artisan of obviousness. *Ortho-McNeil Pharm., Inc. v. Mylan Labs., Inc.* Slip Op. 2007-1223, 2008 U.S. App. LEXIS 6786 (Fed. Circ., Mar. 31, 2008) Applicants therefore respectfully submit that no *prima facie* case of Obviousness has been made out by the Examiner.

Reconsideration and withdrawal of the Rejection respectfully is requested.

C. Response to rejection of claim 8 under 35 U.S.C. §103(a) as being unpatentable over Segalini in view of Harlin et al.

In response to the rejection of claim 8 under 35 U.S.C. 103(a) as being unpatentable over Segalini in view of U.S. Patent No. 6,476,161 of Harlin et al. (“Harlin”), Applicants respectfully submit that a *prima facie* case of Obviousness has not been made out, and traverse the rejection.

The threshold showing required under §103 has been discussed above.

As discussed above, Segalini does not teach, suggest, or disclose a process having at least one widening and narrowing in a region other than that of the axial pump. Harlin does not remedy the deficiencies of Segalini. Harlin is directed to a method and apparatus for introducing polymer slurry from a slurry reactor into a gas-phase reactor containing a fluidized bed. Harlin’s loop reactor, R1, does not disclose a widening and narrowing in a region other than that of the axial pump. Nor does Harlin contain any teaching or suggestion that the use of such a widening and narrowing would improve the solids concentration of the reactor product.

For the above reasons, reconsideration and withdrawal of the Rejection respectfully is requested.

Applicants respectfully request that a timely Notice of Allowance be issued in this case. Should the Examiner have questions or comments regarding this application or this Amendment, Applicants' attorney would welcome the opportunity to discuss the case with the Examiner.

The Commissioner is hereby authorized to charge U.S. PTO Deposit Account 08-2336 in the amount of any fee required for consideration of this Amendment.

This is intended to be a complete response to the Office Action mailed January 11, 2008.

Respectfully submitted,

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I hereby certify that this correspondence is being deposited with sufficient postage thereon with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on June, 2008.

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